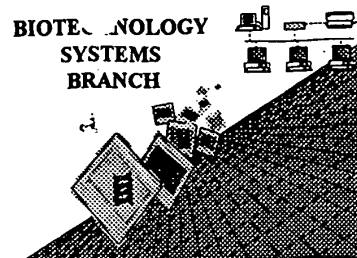


0125



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/903,323

Source: 01PE

Date Processed by STIC: 7/25/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

OIPE

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001
 TIME: 14:03:21

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\07252001\I903323.raw

SEQUENCE LISTING

Does Not Comply
 Corrected Diskette Needed

5 (1) GENERAL INFORMATION:

7 (i) APPLICANT: De Robertis, Edward M.
 8 Bouwmeester, Tewis
 10 (ii) TITLE OF INVENTION: Endoderm, Cardiac and Neural Inducing
 11 Factors
 13 (iii) NUMBER OF SEQUENCES: 10
 15 (iv) CORRESPONDENCE ADDRESS:
 16 (A) ADDRESSEE: Majestic, Parsons, Siebert & Hsue
 17 (B) STREET: Four Embarcadero Center, Suite 1100
 18 (C) CITY: San Francisco
 19 (D) STATE: California
 20 (E) COUNTRY: U.S.A.
 21 (F) ZIP: 94111-4106
 23 (v) COMPUTER READABLE FORM:
 24 (A) MEDIUM TYPE: Floppy disk
 25 (B) COMPUTER: IBM PC compatible
 26 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 27 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
 29 (vi) CURRENT APPLICATION DATA:
 30 (A) APPLICATION NUMBER: US/09/903,323
 31 (B) FILING DATE: 11-Jul-2001
 32 (C) CLASSIFICATION:
 34 (vii) PRIOR APPLICATION DATA:
 35 (A) APPLICATION NUMBER: US 60/020,150
 36 (B) FILING DATE: 20-JUN-1996
 38 (viii) ATTORNEY/AGENT INFORMATION:
 39 (A) NAME: Siebert, J. Suzanne
 40 (B) REGISTRATION NUMBER: 28,758
 41 (C) REFERENCE/DOCKET NUMBER: 3100.0020S1
 43 (ix) TELECOMMUNICATION INFORMATION:
 44 (A) TELEPHONE: 415/248-5500
 45 (B) TELEFAX: 415/362-5418

ERRORED SEQUENCES

330 (2) INFORMATION FOR SEQ ID NO: 5:
 332 (i) SEQUENCE CHARACTERISTICS: → 907 (p3)
 333 (A) LENGTH: 979 amino acids
 334 (B) TYPE: amino acid
 335 (D) TOPOLOGY: linear
 337 (ii) MOLECULE TYPE: peptide
 339 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
 341 Met Leu Leu Leu Phe Arg Ala Ile Pro Met Leu Leu Leu Gly Leu Met
 342 1 5 10 15
 344 Val Leu Gln Thr Asp Cys Glu Ile Ala Gln Tyr Tyr Ile Asp Glu Glu

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/903,323

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\07252001\I903323.raw

345	20	25	30
347	Glu Pro Pro Gly Thr Val Ile Ala Val Leu Ser Gln His Ser Ile Phe		
348	35	40	45
350	Asn Thr Thr Asp Ile Pro Ala Thr Asn Phe Arg Leu Met Lys Gln Phe		
351	50	55	60
353	Asn Asn Ser Leu Ile Gly Val Arg Glu Ser Asp Gly Gln Leu Ser Ile		
354	65	70	75
356	Met Glu Arg Ile Asp Arg Glu Gln Ile Cys Arg Gln Ser Leu His Cys		
357	85	90	95
359	Asn Leu Ala Leu Asp Val Val Ser Phe Ser Lys Gly His Phe Lys Leu		
360	100	105	110
362	Leu Asn Val Lys Val Glu Val Arg Asp Ile Asn Asp His Ser Pro His		
363	115	120	125
365	Phe Pro Ser Glu Ile Met His Val Glu Val Ser Glu Ser Ser Ser Val		
366	130	135	140
368	Gly Thr Arg Ile Pro Leu Glu Ile Ala Ile Asp Glu Asp Val Gly Ser		
369	145	150	155
371	Asn Ser Ile Gln Asn Phe Gln Ile Ser Asn Asn Ser His Phe Ser Ile		
372	165	170	175
374	Asp Val Leu Thr Arg Ala Asp Gly Val Lys Tyr Ala Asp Leu Val Leu		
375	180	185	190
377	Met Arg Glu Leu Asp Arg Glu Ile Gln Pro Thr Tyr Ile Met Glu Leu		
378	195	200	205
380	Leu Ala Met Asp Gly Gly Val Pro Ser Leu Ser Gly Thr Ala Val Val		
381	210	215	220
383	Asn Ile Arg Val Leu Asp Phe Asn Asp Asn Ser Pro Val Phe Glu Arg		
384	225	230	235
386	Ser Thr Ile Ala Val Asp Leu Val Glu Asp Ala Pro Leu Gly Tyr Leu		
387	245	250	255
389	Leu Leu Glu Leu His Ala Thr Asp Asp Glu Gly Val Asn Gly Glu		
390	260	265	270
392	Ile Val Tyr Gly Phe Ser Thr Leu Ala Ser Gln Glu Val Arg Gln Leu		
393	275	280	285
395	Phe Lys Ile Asn Ser Arg Thr Gly Ser Val Thr Leu Glu Gly Gln Val		
396	290	295	300
398	Asp Phe Glu Thr Lys Gln Thr Tyr Glu Phe Glu Val Gln Ala Gln Asp		
399	305	310	315
401	Leu Gly Pro Asn Pro Leu Thr Ala Thr Cys Lys Val Thr Val His Ile		
402	325	330	335
404	Leu Asp Val Asn Asp Asn Thr Pro Ala Ile Thr Ile Thr Pro Leu Thr		
405	340	345	350
407	Thr Val Asn Ala Gly Val Ala Tyr Ile Pro Glu Thr Ala Thr Lys Glu		
408	355	360	365
410	Asn Phe Ile Ala Leu Ile Ser Thr Thr Asp Arg Ala Ser Gly Ser Asn		
411	370	375	380
413	Gly Gln Val Arg Cys Thr Leu Tyr Gly His Glu His Phe Lys Leu Gln		
414	385	390	395
416	Gln Ala Tyr Glu Asp Ser Tyr Met Ile Val Thr Thr Ser Thr Leu Asp		
417	405	410	415

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/903,323

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\07252001\I903323.raw

```

419 Arg Glu Asn Ile Ala Ala Tyr Ser Leu Thr Val Val Ala Glu Asp Leu
420          420          425          430
422 Gly Phe Pro Ser Leu Lys Thr Lys Lys Tyr Tyr Thr Val Lys Val Ser
423          435          440          445
425 Asp Glu Asn Asp Asn Ala Pro Val Phe Ser Lys Pro Gln Tyr Glu Ala
426          450          455          460
428 Ser Ile Leu Glu Asn Asn Ala Pro Gly Ser Tyr Ile Thr Thr Val Ile
429 465          470          475          480
431 Ala Arg Asp Ser Asp Ser Asp Gln Asn Gly Lys Val Asn Tyr Arg Leu
432          485          490          495
434 Val Asp Ala Lys Val Met Gly Gln Ser Leu Thr Thr Phe Val Ser Leu
435          500          505          510
437 Asp Ala Asp Ser Gly Val Leu Arg Ala Val Arg Ser Leu Asp Tyr Glu
438          515          520          525
440 Lys Leu Lys Gln Leu Asp Phe Glu Ile Glu Ala Ala Asp Asn Gly Ile
441          530          535          540
443 Pro Gln Leu Ser Thr Arg Val Gln Leu Asn Leu Arg Ile Val Asp Gln
444 545          550          555          560
446 Asn Asp Asn Cys Pro Val Ile Thr Asn Pro Leu Leu Asn Asn Gly Ser
447          565          570          575
449 Gly Glu Val Leu Leu Pro Ile Ser Ala Pro Gln Asn Tyr Leu Val Phe
450          580          585          590
452 Gln Leu Lys Ala Glu Asp Ser Asp Glu Gly His Asn Ser Gln Leu Phe
453          595          600          605
455 Tyr Thr Ile Leu Arg Asp Pro Ser Arg Leu Phe Ala Ile Asn Lys Glu
456          610          615          620
458 Ser Gly Glu Val Phe Leu Lys Lys Gln Leu Asn Ser Asp His Ser Glu
459 625          630          635          640
461 Asp Leu Ser Ile Val Val Ala Val Tyr Asp Leu Gly Arg Pro Ser Leu
462          645          650          655
464 Val Ala Asn Arg Met His Ala Glu Tyr Glu Arg Asp Leu Val Asn Arg
E--> 465 930 660 935 665 940 670
467 Ser Ala Thr Leu Ser Pro Gln Arg Ser Ser Ser Arg Tyr Gln Glu Phe
E--> 468 945 675 950 680 955 685 960
470 Asn Tyr Ser Pro Gln Ile Ser Arg Gln Leu His Pro Ser Glu Ile Ala
E--> 471 690 965 695 970 700 975
E--> 473 Thr Thr Phe 705
780 (2) INFORMATION FOR SEQ ID NO: 9:
782 (i) SEQUENCE CHARACTERISTICS:
783 (A) LENGTH: 325 amino acids
784 (B) TYPE: amino acid
785 (D) TOPOLOGY: linear
787 (ii) MOLECULE TYPE: peptide
789 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
791 Met Val Cys Gly Ser Pro Gly Gly Met Leu Leu Leu Arg Ala Gly Leu
E--> 792 1 5 10 15
794 Leu Ala Leu Ala Ala Leu Cys Leu Leu Arg Val Pro Gly Ala Arg Ala
795 20 25 30
797 Ala Ala Cys Glu Pro Val Arg Ile Pro Leu Cys Lys Ser Leu Pro Trp

```

*misaligned
and and
no. (see
item 3
on Ena
summary
sheet)*

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001
 TIME: 14:03:21

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\07252001\I903323.raw

```

798          35          40          45
800 Asn Met Thr Lys Met Pro Asn His Leu His His Ser Thr Gln Ala Asn
801          50          55          60
803 Ala Ile Leu Ala Ile Glu Gln Phe Glu Gly Leu Leu Gly Thr His Cys
804 65          70          75          80
806 Ser Pro Asp Leu Leu Phe Phe Leu Cys Ala Met Tyr Ala Pro Ile Cys
807          85          90          95
809 Thr Ile Asp Phe Gln His Glu Pro Ile Lys Pro Cys Lys Ser Val Cys
810          100          105          110
812 Glu Arg Ala Arg Gln Gly Cys Glu Pro Ile Leu Ile Lys Tyr Arg His
813          115          120          125
815 Ser Trp Pro Glu Asn Leu Ala Cys Glu Glu Leu Pro Val Tyr Asp Arg
816          130          135          140
818 Gly Val Cys Ile Ser Pro Glu Ala Ile Val Thr Ala Asp Gly Ala Asp
819 145          150          155          160
821 Phe Pro Met Asp Ser Ser Asn Gly Asn Cys Arg Gly Ala Ser Ser Glu
822          165          170          175
824 Arg Cys Lys Cys Lys Pro Ile Arg Ala Thr Gln Lys Thr Tyr Phe Arg
825          180          185          190
827 Asn Asn Tyr Asn Tyr Val Ile Arg Ala Lys Val Lys Glu Ile Lys Thr
828          195          200          205
830 Lys Cys His Asp Val Thr Ala Val Val Glu Val Lys Glu Ile Leu Lys
831          210          215          220
833 Ser Ser Leu Val Asn Ile Pro Arg Asp Thr Val Asn Leu Tyr Thr Ser
834 225          230          235          240
836 Ser Gly Cys Leu Cys Pro Pro Leu Asn Val Asn Glu Glu Tyr Ile Ile
837          245          250          255
839 Met Gly Tyr Glu Asp Glu Glu Arg Ser Arg Leu Leu Leu Val Glu Gly
840          260          265          270
842 Ser Ile Ala Glu Lys Trp Lys Asp Arg Leu Gly Lys Lys Val Lys Arg
843          275          280          285
845 Trp Asp Met Lys Leu Arg His Leu Gly Leu Ser Lys Ser Asp Ser Ser
846          290          295          300
848 Asn Ser Asp Ser Thr Gln Ser Gln Lys Ser Gly Arg Asn Ser Asn Pro
849 305          310          315          320
851 Arg Gln Ala Arg Asn
852          325

```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001
TIME: 14:03:22

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\07252001\I903323.raw

L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:465 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:5
M:332 Repeated in SeqNo=5
L:473 M:203 E: No. of Seq. differs, LENGTH:Input:979 Found:707 SEQ:5
L:792 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:9